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BEFORE THE MISSISSIPPI PUBLIC SERVICE COMMISSION

Docket No. 2021-AD-19

IN RE: ORDER ESTABLISHING DOCKET TO REVIEW THE EFFICACY AND FAIRNESS OF THE NET METERING AND INTERCONNECTION RULES

COMMENTS OF POSIGEN, INC. ON COMMISSION'S ORDER SEEKING COMMENT

COMES NOW PosiGen, Inc. ("PosiGen"), and pursuant to the Mississippi Public Service Commission's ("Commission") Order Seeking Comment dated February 2, 2021, files these comments.

PosiGen appreciates the opportunity to comment on the efficacy, fairness, and functionality of the Mississippi Renewable Energy Net Metering Rule ("Net Metering Rule") and the Mississippi Distributed Generator Interconnection Rule ("Interconnection Rule"). While there are many positive aspects about the current Net Metering Rule and Interconnection Rule that provide a solid foundation on which to build, there are several major shortcomings that have held back the adoption of distributed generation ("DG") technologies in Mississippi while it has proliferated in many other states across the country. Given the slow adoption of DG in Mississippi to date, it is clear from experience that current Net Metering and Interconnection Rules are insufficient for growing DG adoption. With "solar photovoltaic installer" expected to be the third-fastest growing occupation in the U.S. this decade,[1] Mississippi should take action now so it does not miss out on this huge opportunity. To do so, significant changes are now needed to its Net Metering and Interconnection Rules to ensure that Mississippians can benefit from the energy freedom, economic growth, job creation, and financial benefits of DG technologies.

[1] U.S. Bureau of Labor Statistics, "Fastest Growing Occupations," September 1, 2020, available at: https://www.bls.gov/ooh/fastest-growing.htm.

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PosiGen believes that the changes it recommends below would address the most critical shortcomings of the Net Metering and Interconnection Rules, allowing more customers – especially low- to moderate-income ("LMI") customers – to access the benefits of DG technologies. PosiGen is a provider of residential renewable energy and energy efficiency solutions. Since its founding in 2011, PosiGen has installed more than 15,000 net-metered solar installations in the states of Louisiana, New York, Connecticut, and New Jersey. PosiGen strongly believes in making solar affordable and accessible, especially for low-to-moderate income ratepayers and communities of color. Accordingly, PosiGen uses a unique business model that allows it to help close the clean energy affordability gap by making solar and energy efficiency available to all homeowners regardless of income. More than 12,000 of PosiGen's residential customers have taken advantage of its leasing package, which has no minimum credit requirement, includes both energy efficiency upgrades and a solar net metering system, and is designed to immediately save customers money on their total energy bills. PosiGen is now considering expanding operations into Mississippi, so the rules adopted in this proceeding will be pivotal for PosiGen's business decision.

In addition to the comments provided below, PosiGen respectively requests that the Commission provide an opportunity for intervenors to submit reply comments to respond to other party comments. PosiGen also supports the Commission holding a public hearing to allow for public comments on Net Metering and Interconnection Rules so that the general public has an opportunity to have their voices heard on these important issues.

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POSIGEN'S RESPONSES TO COMMISSION QUESTIONS

PosiGen's comments are organized to respond, as applicable, to the 18 questions included in the Commission's February 2, 2021 Order Seeking Comment. PosiGen supports the full set of proposed changes to the Net Metering and Interconnection Rules developed in collaboration with other intervenors in this proceeding and attached to the Sierra Club's comments (Attachment A, "Community Intervenors Joint Redline"). In addition, at the end of each of PosiGen's responses, as applicable, are specific excerpts of proposed modifications or changes to the current rules with redlined particularity, as requested by the Commission, that PosiGen also has provided here for emphasis to highlight specific changes of particular importance. To the extent there are any differences between PosiGen's comments and the redlined Net Metering and Interconnection Rules attached to Sierra Club's comments, PosiGen's comments should take precedence. Proposed new regulatory language is denoted by an underline (*e.g.*, this), and existing regulatory language that is proposed to be removed is denoted by a strikethrough (*e.g.*, ~~this~~).

1. Have the Net Metering and Interconnection Rules been effective in creating meaningful access to renewable self-supply opportunities for Mississippi electric customers?

No. Although the Net Metering and Interconnection Rules provided a positive step in the right direction in improving access to renewable self-supply opportunities like solar DG for Mississippi customers, they have ultimately fallen far short of providing *meaningful access* to customers.

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Net Metering Adoption Remains Extremely Small in Mississippi

Under existing Net Metering and Interconnection Rules, only a small number of customers have adopted net metering in Mississippi. Through December 2020, Mississippi Power Company ("Mississippi Power") had only 188 total net metering customers with a total of 2.3 MW of installed net metering capacity, and Entergy Mississippi, LLC ("Entergy") had only 104 net metering customers with a total of 1.1 MW of installed net metering capacity.[2] Based on the December 2020 net metering data reported to the U.S. Energy Information Administration and the Total Distribution System Peak Demand reported in each utility's most recent net metering report, the percentage of the utilities' total system peak demand from net metering is approximately 0.160% for Mississippi Power and approximately 0.037% for Entergy.[3] Clearly, only a tiny number of customers of Mississippi's investor-owned utilities[4] to date have been able to benefit under the existing Net Metering and Interconnection Rules.

Overall, Mississippi ranks 45th out of 50 states in terms of installed net metering capacity. Only Tennessee, South Dakota, and North Dakota reported lower total amounts of net metering capacity installed, as well as Alabama and Georgia reporting zero net metering capacity. In total, Mississippi had 6.3 MW of installed net metering capacity based on 497 customers.[5] In comparison, many other states in the Southeast that have offered or currently offer retail-rate net metering have reported significantly higher

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2 U.S. Energy Information Administration, Form 861M, December 2020, available at: https://www.eia.gov/electricity/data/eia861m/.

3 Based on the most recent net metering reports filed in Docket Nos. 2016-UN-32 and 2016-UN-33, showing the Total Distribution System Peak in 2019 was 2,994 MW for Entergy and in 2018 (the most recently available data at the time the report was filed) was 1,439 MW for Mississippi Power.

4 There is significantly less data available regarding the adoption of net metering by electric cooperatives and municipal utilities in Mississippi.

5 U.S. Energy Information Administration, Form 861M, tab "Monthly_Totals-States" for December 2020, available at: https://www.eia.gov/electricity/data/eia861m/.

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installed net metering capacity and more net metering customers, including Arkansas (59.1 MW; 2,872 customers), Kentucky (21.7 MW; 1,663 customers), Louisiana (156.2 MW; 25,767 customers), North Carolina (186.3 MW; 19,510 customers), and South Carolina (241.2 MW; 22,919 customers).[6]

Retail Rate Net Metering Is Key to Improving Customer Access to DG

A key distinction between Mississippi and states with greater adoption rates of DG technologies that explains a substantial portion of this discrepancy is the compensation rate that is applied to electricity that is generated by a DG customer that is exported to the grid ("excess energy"). Traditional retail-rate net metering, employed by at least 43 states at its peak and currently in place in approximately 39 states for most residential and small commercial customers, allows customers to net their exported kWh of electricity over the entire billing month against the kWh of electricity imported from the grid during the billing month. Any monthly net excess generation is then rolled over to future billing months, often as a kWh credit.

Retail-rate net metering can be distinguished from alternative DG crediting policies where DG exports are compensated at a lower rate than the retail rate, which is sometimes referred to as "net billing," although various other terms have also been used. Specifically, net billing is when a utility compensates an eligible DG customer for electricity generated by the customer that is fed back to the electric grid using a rate other than the retail rate for consumption, after netting production and consumption over intervals shorter than the billing period (e.g., instantaneous, 15-minute or 1-hour intervals).[7] Figure 1 identifies states

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[6] U.S. Energy Information Administration, Form 861M, tab "Monthly_Totals-States" for December 2020, available at: https://www.eia.gov/electricity/data/eia861m/.

[7] *See, e.g.,* Tom Stanton, "Review of State Net Energy Metering and Successor Rate Designs," National Regulatory Research Institute (2019), p. 11.

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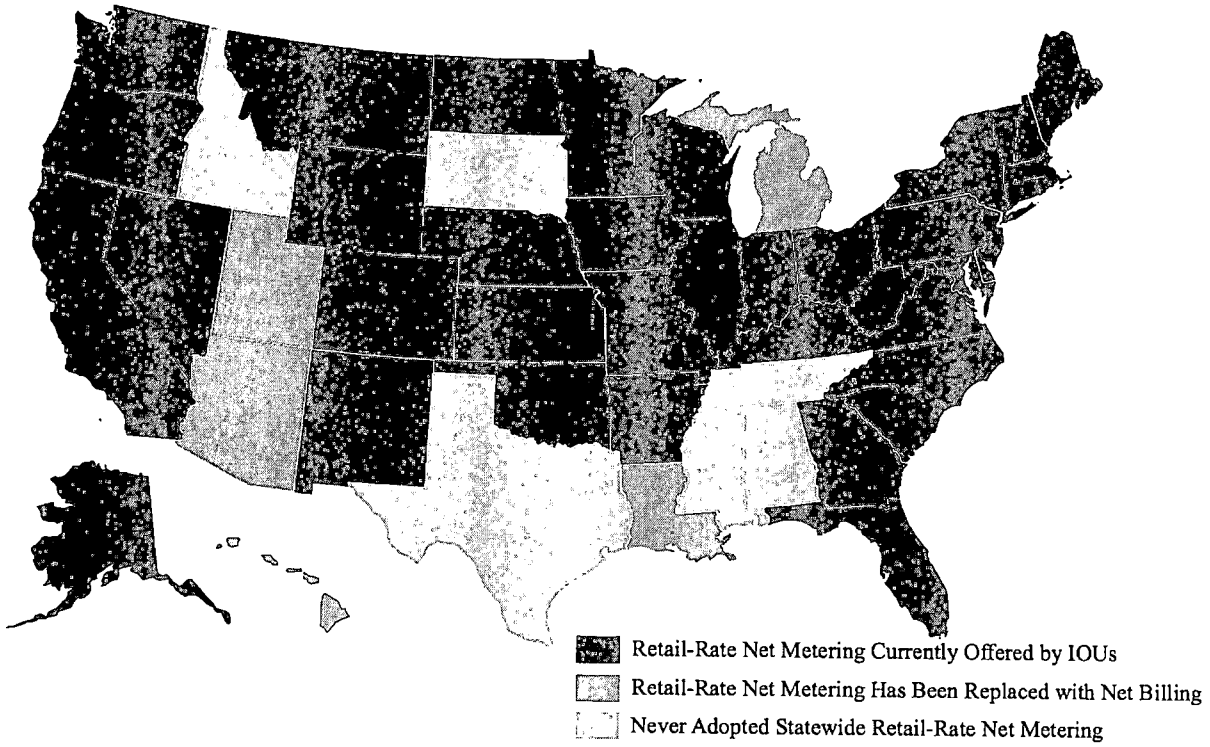
currently offering retail-rate net metering, as well as those that never adopted retail rate net metering, such as Mississippi, or that transitioned to net billing.

Figure 1. Net Metering and Net Billing Availability for Residential and Small Commercial Investor-Owned Utility Customers



In Mississippi, the compensation rate for excess energy is currently set at the "Total Benefits of Distributed Generation," which is comprised of (1) the Avoided Cost of Wholesale Power, plus (2) the Non-Quantifiable Expected Benefits or the Actual Benefits of Distributed Generation, plus (3) the Low-Income Benefits Adder, if applicable. For Entergy customers, the Total Benefits of Distributed Generation is $0.064/kWh for customers ineligible for the Low-Income Benefits Adder, and $0.084/kWh for customers

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eligible for the Low-Income Benefits Adder.[8] For Mississippi Power, the Total Benefits of Distributed Generation is $0.0527/kWh and $0.0498/kWh for July-October and November-June, respectively, for customers ineligible for the Low-Income Benefits Adder, and $0.0727/kWh and $0.0698/kWh for July-October and November-June, respectively, for customers eligible for the Low-Income Benefits Adder.[9] These compensation rates are significantly below the respective residential volumetric retail rates when factoring in riders and bill adjustments. The low compensation rate for excess energy is the primary factor in explaining why the current Net Metering Rule has failed to provide meaningful access to DG. It does not appear that a single low income eligible ratepayer has been able to access DG under the current low compensation rate.

Mississippi's Net Metering Cost-Benefit Study

In 2014, Synapse Energy Economics conducted a cost-benefit analysis of net metering in Mississippi that found net metering would entail net benefits under nearly every scenario and sensitivity analyzed. As illustrated in Figure 2 below, Synapse found that "solar net metering would provide net benefit to the state of Mississippi. With estimated benefits of $170 per MWh and estimated costs of $143 per MWh, net metered solar rooftop would result in $27 per MWh of net benefits to the state and passes the TRC [Total Resource Cost test] with a benefit-to-cost ratio of 1.19."[10] In fact, the study found

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[8] Entergy Mississippi, "Renewable Energy Net Metering Rate Schedule," available at https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_nem.pdf?_ga=2.199141615.1364248691.1615315818-804021187.1615315818.

[9] For simplicity, "Option A" is described here. "Option B" is also available and provides for time-of-used based pricing within the summer and winter seasons. *See* Mississippi Power, "Renewable Energy Net Metering Rate Schedule," available at: https://www.mississippipower.com/content/dam/mississippi-power/pdfs/residential/pricing-and-rates/special-application-rates/RENM-1A.pdf.

[10] Synapse Energy Economics, Inc., "Net Metering in Mississippi: Costs, Benefits, and Policy Considerations," September 19, 2014, pp. 43-44, available at: https://www.synapse-energy.com/sites/default/files/Net%20Metering%20in%20Mississippi.pdf.

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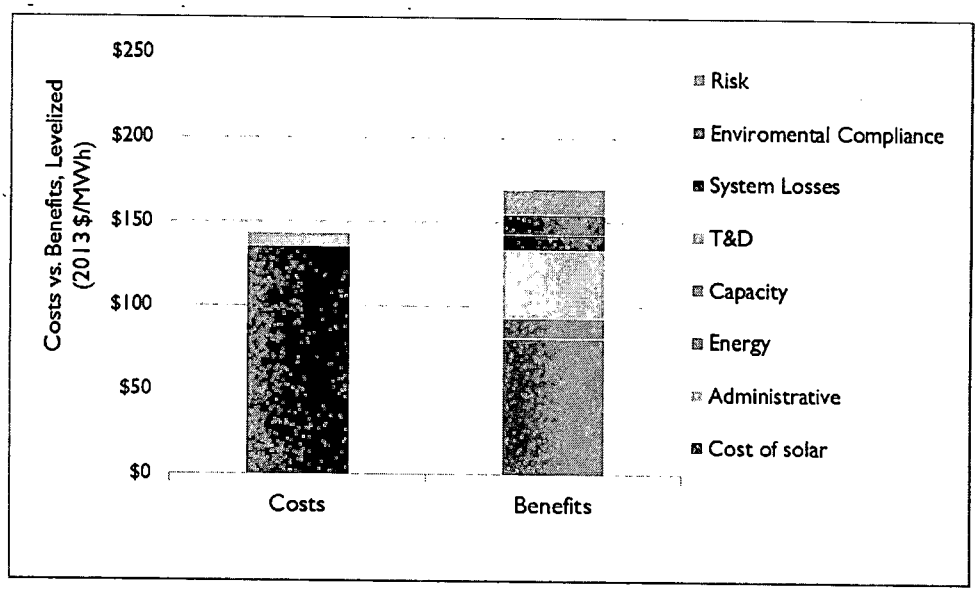
that net metering customers should actually be compensated *above* the variable retail rate for their excess generation to fairly compensate net metering customers, as well as to induce participation in net metering programs.[11] These results specific to Mississippi provide further support for significantly increasing the compensation rate for net metering customers now. They also bolster support for providing a compensation rate to low-income customers that is above the current volumetric retail rate to specifically enable and encourage participation by these customers, as described in more detail below in response to Question 4.

Figures 2. Levelized Potential Benefit/Cost Comparison under Total Resource Cost Test[12]



11 *See Ibid*, p. 39 (Stating that "As shown in Figure 17, under net metering rules in which customers are only compensated at the variable retail rate, the levelized benefits ($124 per MWh) would be lower than levelized costs ($135 per MWh) resulting in a benefit-to-cost ratio below 1.0—suggesting that net metering would not be attractive to develop for economic reasons. If, instead, customers were compensated at the avoided cost rate ($170 per MWh) for every MWh of generated energy, projects would realize a return on investment." Note that the phrase "avoided cost rate" used here refers to the monetized benefits akin to a Value of Solar, and not the avoided cost rate used for Qualifying Facilities under the Public Utility Regulatory Policy Act of 1978.)

12 *Ibid*, p. 44.

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Solar Job Growth Potential

Improving the Net Metering and Interconnection Rules provides an opportunity to bring significant economic development and job creation to the state. Rooftop solar installer jobs in particular are usually local, full time jobs that pay a living wage and that cannot be outsourced. The following table highlights Mississippi's installed solar capacity, number of solar installations, and solar jobs compared to other states in the Southeast. The figures in the table include all types of solar, including both solar DG and utility-scale solar. Although a confluence of factors impacts solar deployment at various scales, the table indicates that retail-rate net metering has been one of the key policies supporting solar job creation in many of these other states. Currently, Mississippi ranks second-to-last in the number of solar installations and third-to-last in solar jobs in the Southeast. With the right policy adjustments, Mississippi could jumpstart the solar industry and bring more economic benefits and jobs to the state, as has been seen from the experience of other Southeast states.

State	MW Solar	Installations	Solar Jobs
Mississippi	318.16	815	847
Alabama	283.10	156	707
Arkansas	376.52	2,280	329
Florida	5,748.73	73,907	12,202
Georgia	2,668.08	2,225	4,798
Kentucky	56.55	2,464	1,362
Louisiana	189.60	21,117	3,352
North Carolina	6,451.05	17,788	6,617
South Carolina	1,717.45	21,754	3,307
Tennessee	351.14	2,599	4,194
Virginia	1,340.63	13,941	4,489

Source: Solar Energy Industries Association, *Solar State by State*, available at https://www.seia.org/states-map

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2. What, if any, modifications to the Net Metering and Interconnection Rules could meaningfully increase customer access to renewable self-supply?

The most important modification that the Commission could make to the Net Metering and Interconnection Rules to meaningfully increase customer access to renewable self-supply would be to change the compensation rate from a calculation of the Total Benefits of Distributed Generation to kWh bill credits, which would effectively compensate all excess energy at the applicable volumetric retail rate, inclusive of all volumetric riders and adjustments. Simply put, the existing Total Benefits of Distributed Generation framework undercompensates net metering customers for the many long-term benefits provided by their investment and adds complexity to estimating the financial payback of a DG investment, clearly discouraging those ratepayers from making such a large investment. Since many prospective net metering customers are interested in a DG investment as a way to save money, in addition to the other benefits provided by DG, a low compensation rate increases the time it takes for a net metering customer to fully recoup their upfront investment. For customers that finance a net metering system, a low compensation rate for exports could mean that a customer does not save money under a net metering investment, as the total benefits of the net metering system (*i.e.*, offsetting instantaneous electricity consumption plus earning credits for exported electricity at the Total Benefits of Distributed Generation rate) could be below the financing payment.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 2

108 "Net Metering" means ~~measuring~~ netting the ~~real-time~~ total kilowatt-hours supplied by the EU to the RENMIC and the total kilowatt-hours produced by the RENMIC's DGF and exported to the EU over the applicable Billing Period. Net metering includes the real-time displacement of kilowatt-hours that otherwise would be provided by the EU by kilowatt-hours that were generated by the RENMIC's DGF. An EU may

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employ a multi-channel meter for separately measuring the RENMIC's electric usage and excess energy exported to the EU.

Net Metering Rule, Chapter 3

105 In each Billing Period, if the energy supplied to the RENMIC from the EU ~~as recorded on the EU's bi-directional net meter~~ exceeds the energy supplied by the RENMIC to the EU, the RENMIC will be billed for the net energy supplied to the RENMIC using appropriate commission-approved rate and rider schedules. In each Billing Period, if the energy supplied to the RENMIC from the EU is less than the energy supplied by the RENMIC to the EU, the RENMIC shall only be billed for the applicable fixed monthly customer charges or minimum bill provisions in accordance to Chapter 3, 109. ~~This provision means that energy self-supplied by the RENMIC, up to the amount supplied from the EU to the RENMIC (e.g., through the recording of meter Channel 1) will be credited to the RENMIC at the full retail rate (i.e., effectively displacing energy supplied from the EU). During~~ At the end of that same Billing Period, any net excess energy supplied from the RENMIC to the EU ~~and recorded on the EU's bi-directional net meter in kWh (e.g., through meter Channel 2) will~~ shall be credited on the RENMIC's bill as a kWh credit. ~~at the applicable Total Benefits of Distributed Generation expressed in cents per kWh and shall be accounted for through the EU's fuel adjustment clause~~. ~~The customer's monthly bill will be the total of billing for any usage (i.e., as recorded on meter Channel 1) subject to any customer charge and/or minimum bill provisions in the EU's rate and rider schedules less any credit due to the customer from excess energy exported to the EU (i.e., as recorded on meter Channel 2). If the sum total of the monthly bill is negative, any such amount~~ KWh credits ~~will~~ shall be carried over to the next Billing Period and ~~applied to~~ offset on a one-to-one basis any ~~charges~~ kWh usage by the RENMIC arising during the subsequent Billing Period.

3. What, if any, modifications to the Net Metering and Interconnection Rules would incentivize increased participation by both net metering customers and industry providers such as developers, designers, installers and maintenance providers for distributed generation facilities?

As a provider of residential solar and energy efficiency solutions, PosiGen believes there are several modifications that would incentivize increased participation of both customers and providers for DG facilities. Based on our experience installing more than 15,000 net-metered solar installations in four states, we believe the following changes, in

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addition to those outlined in our responses to other questions here, particularly Question 2, would help remove barriers and facilitate greater participation:

Interconnection

Several provisions of the Interconnection Rules could pose barriers, either presently or in the future as additional net metering systems are installed, that could result in barriers to deploying DG in Mississippi. In general, PosiGen recommends the Commission refer to the Interstate Renewable Energy Council's ("IREC") *Model Interconnection Procedures* for best practices on interconnection rules.[13] Several of the redline Interconnection Rule changes recommended below come from IREC's *Model Interconnection Procedures*. Specifically, PosiGen urges the Commission to ensure that residential customers do not face any unreasonable barriers for having their interconnection applications processed in a timely manner under Level 1 screens. Accordingly, PosiGen recommends certain modifications below to Level 1 screens and timelines below, including a change to one of the Level 1 screens to align with IREC's model guidelines, although additional changes could also be warranted. While these might not be major barriers today, examples from other states have illustrated that interconnection can quickly turn into a major barrier as net metering adoption increases.

Second, PosiGen applauds the Commission for adopting an Interconnection Rule that provides for no interconnection fee for Level 1 applications, and strongly urges the Commission to retain this provision. Furthermore, PosiGen recommends that the Commission strike language from the Interconnection Rule that would allow the utility to charge a fee for *resubmitted* interconnection applications. There is no indication that such

[13] Interstate Renewable Energy Council, Inc., Model Interconnection Procedures (2019), available at https://irecusa.org/publications/irec-model-interconnection-procedures-2019.

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a fee is necessary, but it could impose a substantial and inappropriately punitive financial barrier to installing a DG system, and one that would most significantly and negatively impact LMI customers. Customers submitting an interconnection application already have a strong incentive to ensure the application comports with all requirements, as having to resubmit an application could cause undesirable delays in commissioning the net metering system.

Third, the experience of solar developers from across the country during the COVID-19 pandemic suggests that Witness Testing can be achieved safely and efficiently through alternatives to required on-site testing. Requirements for on-site Witness Testing can be burdensome, unnecessarily restrictive given current technological capabilities, and lead to costly delays in project commissioning. PosiGen recommends changes to the Interconnection Rule to specify that such testing does not need to be conducted on-site, especially for residential net metering systems, which would allow for remote Witness Testing. This could improve efficiency and cut burdensome red tape, while still keeping safety as a top priority.

Fourth, utilities should publish Hosting Capacity Maps on their respective websites to identify where there is available hosting capacity to accommodate DG at every feeder on the distribution system. This transparency will be critical for smoothly interconnecting customers as the utilities experience higher quantities of DG on their systems as it will allow customers and solar providers to easily identify areas where additional DG can and cannot be easily accommodated on the system.

Finally, PosiGen recommends that the Commission specify penalties that would apply to utilities that miss timelines specified in Interconnection Rules for processing and

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reviewing interconnection applications. Such an enforcement mechanism is unfortunately necessary based on the experience of solar developers and utilities in other states, where utilities have demonstrated a pattern of slow-walking connecting customers to the grid.[14] An appropriate enforcement mechanism would ensure Entergy and Mississippi Power are incentivized to streamline their interconnection processes and devote the appropriate resources to ensuring customers can be connected to the grid in a timely manner.

Rate Design

While perhaps outside the scope of this inquiry, it nonetheless bears mentioning that rate design plays an important interacting role with net metering policies that together can either encourage or discourage DG adoption. Current default residential rate designs employed by Mississippi Power and Entergy could be creating artificial barriers to net metering adoption.

Of particular concern, Mississippi Power currently has the highest fixed charge in the nation among investor-owned utilities under its default residential service rate, Schedule R-59I.[15] The $0.90 per day charge for single phase service translates to a monthly charge of approximately $27.38.[16] In contrast, Entergy's monthly fixed charge is only $6.75 under RS-38C. Net metering customers cannot offset fixed charges through excess generation, so the more the utility recovers through its fixed charge, the smaller the potential bill savings available to a prospective net metering customer. Furthermore,

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[14] EQ Research, "Comparing Utility Interconnection Timelines for Small-Scale Solar PV (2nd Edition)," October 2016, available at: http://eq-research.com/wp-content/uploads/2016/10/EQ-Interconnection-Timelines-2016.pdf.

[15] Direct Testimony of Justin R. Barnes on Behalf of Environmental Respondent, Attachment JRB-5 - Current IOU Residential Fixed Charges, Virginia State Corporation Commission, Case No. PUR-2020-00015, July 30, 2020, available at: https://scc.virginia.gov/docketsearch/DOCS/4p%23w01!.PDF.

[16] The per-day fixed charge ($0.90) is converted into a monthly fixed charge value by multiplying by 365 days and dividing by 12 months. Note: Fixed charges described in this paragraph are exclusive of any applicable fixed charges through bill riders.

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Mississippi Power's residential volumetric rates are quite complicated, using seasonally based rates that are on an inclining block schedule in summer and a declining block schedule in the shoulder and winter billing months. This adds significant complexity to estimating bill savings potential under net metering. Entergy's default residential rate is simpler, but the declining block rate is unfavorable to net metering, as it provides a smaller economic incentive to reduce the marginal unit of consumption through both energy efficiency and solar net metering ($0.070934/kWh for usage above 500 kWh) than the average rate paid or the rate paid for the initial 500 kWh of usage ($0.098815/kWh), thereby penalizing energy consumers who use less electricity, who are frequently lower income customers.

Net Metering Legacy Rights

One critically important issue to address in the Net Metering Rule is the issue of Legacy Rights, previously referred to as "grandfathering,"[17] that will apply to net metering customers should the Commission make changes to the Net Metering Rule in the future. PosiGen recommends that the Commission expressly provide that a net metering customer be guaranteed the same terms that were in place on the date in which the customer submitted their completed net metering application for a period of 25 years, and in the alternative, no less than 20 years. The 25-year period is ideal because many solar panels used in net metering systems carry a 25-year performance warranty, which guarantees that

[17] The use of term grandfathering is increasing being replaced due to the racist origins of this term, as "grandfathering clauses" were adopted by some states following the Civil War to prevent Black people from voting. *See, e.g.,* Request for Rehearing and Request for Clarification of PJM Interconnection, L.L.C., Federal Energy Regulatory Commission Docket No. EL-16-49 and Consolidated Docket Nos. ER18-1314 and EL18-178, January 21, 2020, Footnote 21 (noting that "Because the term 'grandfathering' carries historically negative connotations, PJM encourages the use of an alternative term…").

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the solar panel will not lose more than 20% of its output capacity during that time.[18] PosiGen recommends a bare minimum of a 20-year Legacy Period to correspond to common solar lease periods of the same length, including leases offered by PosiGen to residential customers. Clearly articulated Legacy Rights will give net metering customers peace of mind that they will be able to still earn a return on their large investment should the Commission decide to change Net Metering Rule (e.g., modify the compensation rate) in the future. It will also help to give solar installers the business certainty and confidence needed to expand operations into the state.

Net metering Legacy Rights should also provide that a residential net metering customer has the right to continue to be able to take service under the same rate design (although specific rate components can still increase or decrease over time) to provide customers a basic protection against utilities imposing deleterious rate design changes *after* a net metering system is installed that could significantly erode the financial value proposition to the customer. One such rate design change that has been proposed by utilities in other jurisdictions that would have this impact is the imposition of a three-part residential rate, i.e., a default residential rate featuring a demand charge in addition to fixed and variable energy charge components. Should the Commission adopt retail rate net metering through this proceeding, a subsequent shift in the underlying rate design employed by the utility could have a dramatic impact on the effective compensation rate received by a net metering customer for excess energy, as it would be tied to the volumetric retail rate.

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[18] *See, e.g.,* Beren Argetsinger and Benjamin Inskeep, "Standards and Requirements for Solar Equipment, Installation, and Licensing and Certification: A Guide for States and Municipalities" Clean Energy States Alliance (February 2017), at 39.

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Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 2

111 "Legacy Rights" means the rules, terms, conditions, compensation rate, and rate design applicable to the RENMIC in effect at the time a RENMIC submits an Interconnection Agreement to the EU.

Net Metering Rule, Chapter 3

116 The DGF of a RENMIC who submits an Interconnection Agreement to the EU before the date on which the Commission issues a final decision modifying (1) the Net Metering Rule, (2) the RENMIC's applicable rate design structure, or (3) the EU's net metering tariff, shall remain under the net metering rate structure, compensation rate, rules, terms, and conditions in effect when the Interconnection Agreement was signed by the RENMIC, for a period of twenty-five (25) years from the date on which the RENMIC submitted the Interconnection Agreement. A DGF that is upgraded, modified, or repaired shall retain its Legacy Rights status so long as the DGF still meets the requirements for participation in net metering under this rule. The Legacy Rights period shall be applied to the DGF on the premises rather than the RENMIC. The Legacy Rights period shall continue to apply if the premises are sold or conveyed to a different RENMIC. A RENMIC has the right to terminate the Legacy Rights for their DGF at any time and take service under any available alternative in place at that time for which the customer is eligible.

Interconnection Rule, Chapter 2

103 "Certified Interconnection Equipment" or "Certified Equipment" or "Certified" means a designation that the Interconnection Equipment meets the following requirements:

[....]

7. Certified Interconnection Equipment shall not require further design testing or Production Testing, as specified by IEEE Standard 1547 Sections 5.1 and 5.2, or additional Interconnection Equipment modification to meet the requirements. ~~However, nothing herein shall preclude the need for an on-site Witness Test or operational test by the Interconnection Customer.~~

138 "Witness Test" means verification ~~(through on-site observation)~~ by the EU that the installation evaluation required by IEEE Standard 1547 Section 5.3 and the Commissioning Test required by IEEE Standard 1547 Section 5.4, have been adequately performed. For Interconnection Equipment that has not been Certified, the Witness Test shall also include the verification by the EU of the ~~on-site~~ design tests as required by IEEE Standard 1547 Section 5.1 and verification by the EU of Production Tests required by IEEE Standard 1547 Section 5.2. All tests verified by the EU are to be performed in accordance with the applicable test procedures specified by IEEE Standard 1547.1.

Interconnection Rule, Chapter 3

[New] To facilitate the efficiency of Interconnection Requests, each EU shall publish Hosting Capacity Maps on its website that demonstrate the Hosting Capacity for

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accommodating generation at every feeder on the distribution system without requiring mitigations such as significant Distribution System Upgrades.

102 Interconnection fees shall be governed as follows for all Interconnection Requests and shall be published on each EU's website: 1. An EU may not charge an application, or other fee, to an applicant that requests Level 1 interconnection review. ~~However, if an application for Level 1 interconnection review is denied because it does not meet the requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure in accordance with the MDGIR, the EU may impose a fee for the resubmitted application, consistent with this section.~~

Interconnection Rule, Chapter 5

101 For Level 1 Interconnection Review, the EU shall first evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:

1. For interconnection of a proposed DGF to a Line Section on a Radial Distribution Circuit, the aggregated generation on the Line Section, including the proposed DGF, shall not exceed 15% of the Line Section annual peak load.

2. When a proposed DGF is to be interconnected to a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed DGF, may not exceed ~~20 kW~~ 65 percent of the transformer nameplate power rating.

3. When a proposed DGF is single-phase and is to be interconnected to a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.

4. Construction of facilities by the EU on its own system is not required to accommodate the DGF.

102 The Level 1 Interconnection Review shall then be conducted in accordance with the following procedures:

1. An EU shall, within 10 business days after receipt of the Interconnection Request, inform the Interconnection Customer in writing or by electronic mail that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing. An EU shall, within 3 business days of submission, provide written confirmation to the Interconnection Customer of receipt of the Interconnection Request.

2. When an Interconnection Request is complete, the EU shall assign a Queue Position.

3. The EU shall, within ~~15~~ seven (7) business days after notifying a Level 1 applicant that the application is complete, indicate that the DGF equipment meets all Level 1 criteria, verify the DG can be interconnected safely and reliably using

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Level 1 screens, and provide a conditionally approved Level 1 Interconnection Application Form and Agreement to the Interconnection Customer.

4. What, if any, modifications to the Net Metering and Interconnection Rules should the Commission consider to increase low-income access to, and participation in, net metering?

PosiGen applauds the Commission for emphasizing the importance of improving low-income access to, and participation in, net metering. To our knowledge, not a single low-income customer has participated in net metering under the current Mississippi Rules. As the nation's leading provider of solar and efficiency solutions for LMI households, PosiGen's mission is aligned with the Commission's goal to facilitate greater net metering participation by LMI households. For example, PosiGen has installed thousands of net metering systems for LMI customers in Louisiana. Thanks in part to PosiGen's focus on developing innovative financing solutions for LMI customers, Louisiana has become the national leader in LMI net meting adoption and has a particularly large share of low credit-score solar adopters, as well as customers with annual household incomes below $50,000 as depicted in Figure 3, compared to other states.[19] Solar net metering can be available to customers of all income levels with the right policies in place.

[19] Galen Barbose, Sydney Forrester, Naïm Darghouth, and Ben Hoen, "Income Trends among U.S. Residential Rooftop Solar Adopters," February 2020, Available at: https://eta-publications.lbl.gov/sites/default/files/solar-adopter_income_trends_report.pdf.

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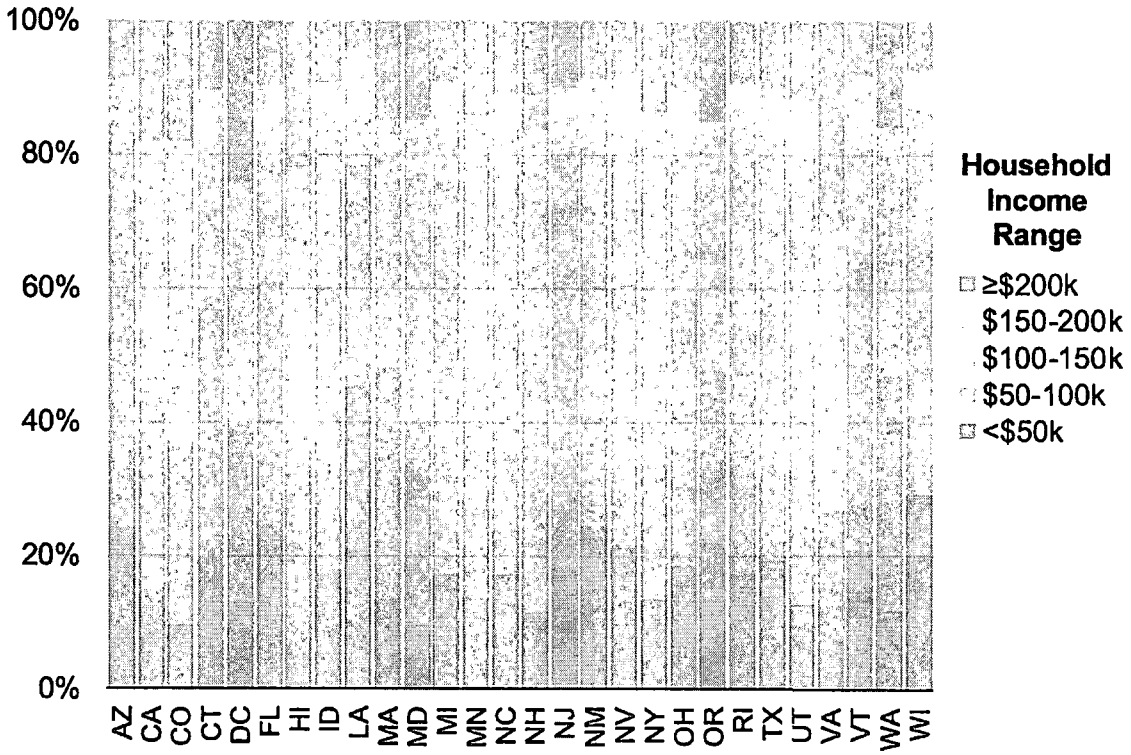
Figure 3. Solar Adopters by Household Income (2018)[20]



Mississippi Customers Have the Highest Energy Burden in the Nation

Low-income households spend a larger portion of their income on their energy bills, or have a higher "energy burden," than other households. As shown in Figure 4, Mississippi has the highest low-income energy burden in the nation. Adjustments to Mississippi's Net Metering and Interconnection Rules that enable bill savings through solar net metering offers one promising tool for addressing the high energy burden faced by many customers.

[20] *Ibid.*

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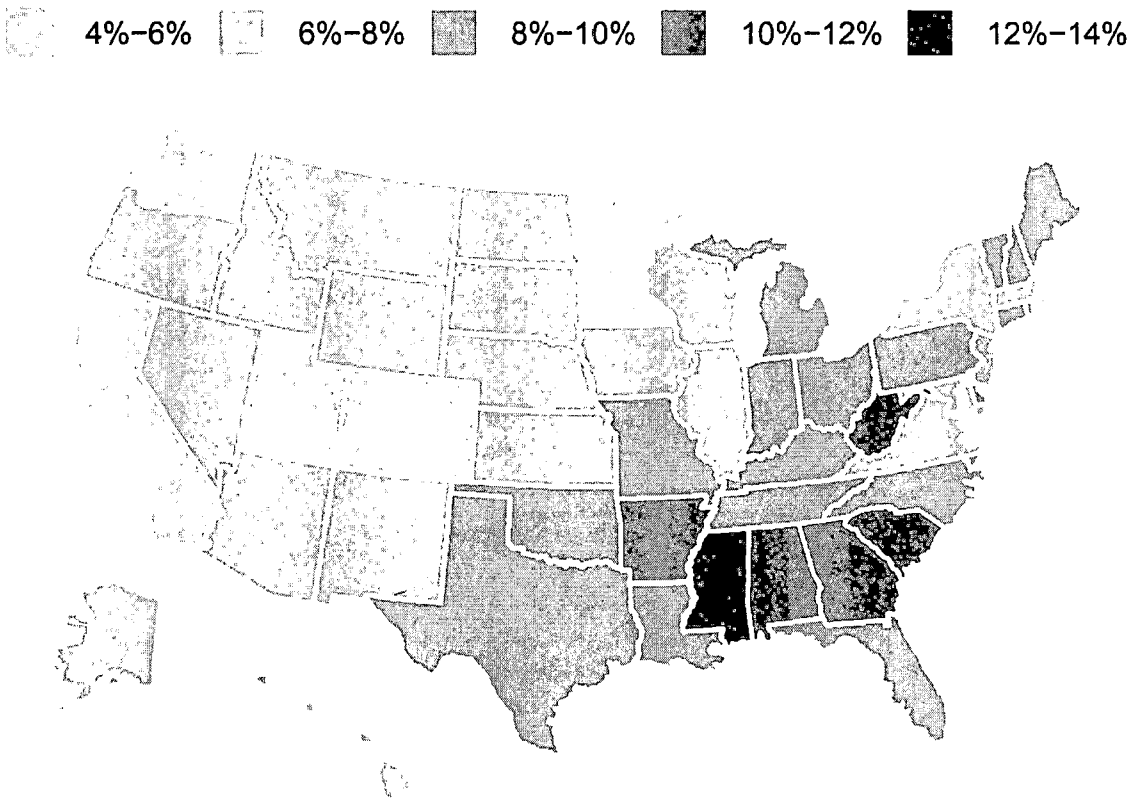
Figure 4. Low-Income Energy Burden (% of Income)[21]



Compounding the injustice of high energy burdens on low-income customers is emerging evidence that low-income customers may have electricity consumption patterns that are actually less costly to serve than other similarly situated customers. A recent study analyzing detailed smart meter data from 2.5 million Illinois customers found that "low-income households were significantly more likely to exhibit lower overall [kWh consumption] volumes and flatter load-shapes."[22] In other words, low-income customers may be currently paying more than their cost of service under standard residential rates that

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[21] U.S. Department of Energy Office of Energy Efficiency and Renewable Energy, "Low-Income Household Energy Burden Varies Among States — Efficiency Can Help In All of Them," 2019, available at: https://www.energy.gov/sites/prod/files/2019/01/f58/WIP-Energy-Burden_final.pdf.

[22] Jeff Zethmayr and Ramandeep Singh Makhija, "Six unique load shapes: A segmentation analysis of Illinois residential electricity consumers," The Electricity Journal, 2019, available at: https://www.citizensutilityboard.org/wp-content/uploads/2019/06/ClusterAnalysisFinal.pdf

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are designed to collect the cost of service for the overall residential class, since they are more likely to have smaller peaks and lower usage, revealing a longstanding and ongoing legacy cost shift benefiting higher income ratepayers at the expense of lower income ratepayers. One of the conclusions the authors reached from this detailed examination of usage patterns is "the high value proposition of energy efficiency and distributed energy resources in reducing system costs. Programs encouraging energy efficiency adoption and distributed energy resources investment in urban areas are important and beneficial for low-income communities."[23] This study reinforces the acute need to directly address low-income customer energy burdens, and the role that energy efficiency and distributed generation can play as effective tools to addressing those energy burdens.

PosiGen Is Dedicated to Making Solar Accessible to Customers of All Incomes

PosiGen is helping to address high LMI customer energy burdens by lowering the total amount spent by these households on their energy bills each month. This is achieved through a combination of national best practices energy efficiency measures and a solar net metering system. PosiGen utilizes Building Performance Institute-certified energy efficiency auditors and contractors for every customer, performing blower door and duct blaster testing, air sealing, indoor air quality testing, and energy efficiency product installation with full energy modeling to ensure the maximum achievable demand reduction possible, while increasing comfort, durability, and often air quality in customers' homes.

PosiGen customers can choose to finance, rather than pay upfront, these costs, and PosiGen's financing model is available to LMI customers that might otherwise struggle to

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23 *Ibid*, p. 7.

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obtain financing for these investments. Under this model, customers make a monthly payment to PosiGen that is typically significantly less than what the customer's energy bill would have otherwise been, as the customer experiences savings from lowering their electricity usage through energy efficiency and benefits from net metering crediting associated with their on-site solar. Changes the Commission adopts to its Net Metering and Interconnection Rules in this proceeding that increase the compensation rate for excess energy and remove barriers to sustainable DG growth could enable PosiGen to offer financial benefits through energy efficiency and solar net metering installations to a broader group of residential customers than it would otherwise be able to.

Modifications to Increase Low-Income Customer Access

There are several ways the Commission could expand low-income customer access to net metering. A recent report by the Lawrence Berkeley National Laboratory that examined various policies and business models that had the potential to increase solar adoption by LMI households identified three interventions that were associated with more equitable adoption: (1) LMI-targeted incentives, (2) leasing, and (3) property-assessed financing.[24] The first two interventions are within scope of this proceeding. With respect to LMI-targeted incentives, PosiGen recommends building on and expanding access to the Low Income Benefits Adder, as described below. Although leasing is currently expressly allowed under the Net Metering Rules, the current net metering compensation regime is insufficient for making leasing a widespread solution, which is why PosiGen recommends the Commission adopt a retail-rate net metering compensation framework. Specific

[24] Eric O'Shaughnessy, Galen Barbose, Ryan Wiser, Sydney Forrester, and Naïm Darghouth, "The Impacts of Policies and Business Models on Income Equity in Rooftop Solar Adoption," December 2020, available at: https://emp.lbl.gov/sites/default/files/webinars/cesa_ne_webinar.pdf.

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solutions related to these two broad categories of intervention are discussed in turn in the following paragraphs.

First, increasing low-income customer access to net metering requires establishing the policies that create a bill saving opportunity for customers. As described above in response to Questions 1 and 2, the single most important way the Commission can improve the value proposition of net metering, thereby allowing a greater number of customers to benefit from bill savings under net metering, is to modify the compensation rate from the Total Benefits of Distributed Generation rate to a kWh bill credit equivalent to the volumetric retail rate (*i.e.,* retail-rate net metering).

Second, the Commission can expand access and reduce barriers to the Low-Income Benefits Adder. The continued use of a Low-Income Benefits Adder is supported by the results of the Synapse net metering study described above, which found that the net metering compensation rate in Mississippi should be a value *above* the volumetric retail rate to reflect the net benefits provided by DG customers. Currently, the Low-Income Benefits Adder is only available to the first 1,000 qualifying customers whose household income is at or below 200% of the federal poverty level. PosiGen recommends retaining the Low-Income Benefits Adder and expanding its availability to more customers. To expand access, the Commission should consider modifying the "200% of the federal poverty level" threshold and replacing it with a metric that would allow a broader group of LMI customers to be eligible. One example is to base eligibility on 120% of Area Median Income, which would be approximately $54,100 for Mississippi,[25] which would open up the Low Income Benefits Adder to a broader group of customers. In comparison, 200% of

[25] U.S. Census Bureau, available at: https://www.census.gov/quickfacts/fact/table/MS/BZA115218. Median household income of $45,081 multiplied by 1.20 is $54,097.

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the federal poverty level in 2021 is approximately $35,000 for a household of two persons and $53,000 for a family of four.[26] In addition, the Commission should eliminate the 1,000 customer cap to allow for more low-income customers to participate. To address potential cost implications, the Low Income Benefits Adder could be slowly reduced as the number of participating low-income customers grows. For example, the Commission could establish a 10% step reduction to the Low Income Benefits Adder for each successive "block" of 1,000 low-income customers that participate, such that the first 1,000 customers receive a $0.02/kWh adder, the next 1,000 customers receive a $0.018/kWh adder, and so forth until fully phased out after 10,000 low-income customers are participating.

The Commission could continue to apply the Low Income Benefits Adder even if the Commission were to adopt kWh crediting of excess generation (*i.e.,* retail rate net metering) for all customers. Specifically, it could create an option for qualifying low-income customers to have their monthly kWh excess generation credit converted into a dollar credit using the applicable volumetric retail rate. The Low-Income Benefits Adder would then be added on to this total each month by multiplying the total kWh generated by the net metering system by the Low-Income Benefits Adder rate. For all other customers, net metering could take the form of kWh bill credits, as described in response to Question 2 above.

Alternatively, since utilities might not measure a customer's total kWh generation (and only measure the excess generation that flows onto the utility's system), the Commission could consider modifying the application of the Low Income Benefits Adder from a per-kWh production incentive to an upfront incentive based on system size (*e.g.,*

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[26] U.S. Department of Health and Human Services, available at: https://aspe.hhs.gov/poverty-guidelines.

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$0.50 per watt of nameplate capacity), which is a very common and simple policy incentive in other states. An upfront incentive would help LMI customers overcome the upfront cost hurdle of installing a system, whereas a per-kWh incentive structure requires the customer to be able to cover the initial upfront cost or finance it, after which the incentive is only gradually accrued over time. An upfront incentive based on the size of the net metering system could therefore be administratively simpler and better address the specific barriers faced by LMI customers. It also lends itself to effective cost containment strategies, such as stepping down the upfront incentive amount after successive thresholds of customer participation are met (e.g., a 10% decline in the incentive amount with each successive 1,000 low-income customers participating).

If the Commission elects to maintain its existing Total Benefits of Distributed Generation rate for compensating excess energy despite the relative lack of participation to date, it could increase LMI participation by increasing the incentive level under the Low-Income Benefits Adder. Under this scenario, PosiGen recommends setting the Low-Income Benefits Adder at a level that would ensure qualifying low-income customers are compensated at a Total Benefits of Distributed Generation rate that is at least as high as the applicable volumetric retail rate.

Third, the Commission can exempt LMI customers from the current provision in the Net Metering Rules (Chapter 3, Section 109) that specify that excess energy credits cannot be applied to reduce fixed monthly customer charges or minimum bills. The extraordinary high fixed charge under Mississippi Power's default residential service tariff is a particular existing challenge to financing residential rooftop solar, as described in more detail above in response to Question 3. Allowing LMI customers to offset these charges

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through bill credits they earn from generating excess energy through their DG facility would create an additional benefit under net metering specifically designed to encourage LMI customer participation in net metering by significantly improving the financial attractiveness of a net metering system for these customers. To implement this recommendation, the Commission could establish a methodology for offsetting the fixed charge or minimum bill amount through kWh credits. For instance, for a utility that had a $10 fixed charge and a $0.10/kWh volumetric retail rate, the fixed charge would be converted into 100 kWh[27] for net metering billing and crediting purposes that an LMI customer would be able to fully offset through 100 kWh of excess generation. Without a provision such as this, PosiGen is concerned that LMI customers in Mississippi Power's service territory would have particular difficulty in realizing a significant financial benefit from a net metering system, even under retail rate net metering, which would be unfair to these customers.

Fourth, the Commission can encourage electric cooperatives and municipal utilities to offer retail rate net metering in their service territories. For example, the Commission and its staff can prioritize providing support, outreach, and education on net metering to encourage its adoption by electric cooperatives and municipal utilities to help ensure all Mississippians have access to the benefits of DG, not just customers of investor-owned utilities. This would ensure that low-income customers across the state could benefit.

Finally, the Commission can continue to ensure Level 1 interconnection applications are not subjected to fees and supplement this policy to waive any application fees that do apply for LMI customers. Examples of fees that could apply to low-income

[27] $10 / $0.10/kWh = 100 kWh.

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customers include fees for resubmitting Level 1 interconnection applications that are deemed incomplete or Level 2 interconnection fees, should the customer's DG facility not pass the Level 1 interconnection screens.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 2

101 "Low-Income Benefits Adder" means an additional amount that shall flow to customers whose household income is at or below 120 percent of State Median Income, as published by the U.S. Department of Housing and Urban Development, 200% of the federal poverty level ~~(or similar requirement proposed by the EU to be approved by the Commission)~~, as published each year in the federal register by the U.S. Department of Health and Human Services, or customers who are enrolled in a low-income program facilitated by the state or an EU who is approved to take service under the EU's net metering tariff. The EU or the Mississippi Public Service Commission may on an ongoing basis approve additional categorical eligibility thresholds to automatically qualify customers as low-income. Beginning with the effective date of this rule, the Low-Income Benefits Adder shall be equal to 2 cents per kilowatt hour. To provide sufficient financial certainty to qualifying low income customers that install DGFs, this Low-Income Benefits Adder shall remain in place for a period of fifteen (15) years from the date the customer begins taking net metering service under the EU's net metering tariff.

Net Metering Rule, Chapter 3

108 Each new Billing Period shall begin with kWh credits to the RENMIC arising from the prior Billing Period(s). When a customer closes his or her account with the EU, if the RENMIC has accumulated a credit ~~dollar~~ balance as a result of excess energy delivered to the EU, any such balance, net of costs owed to the EU, shall be ~~paid to the RENMIC~~ distributed to a designated program to assist low income rate payers, unless the RENMIC affirmatively opts to be paid for the balance at the applicable avoided cost rate.

109 Any RENMIC which qualifies for the Low Income Adder may use credit for any excess energy exported to the EU to reduce fixed monthly customer charges or minimum bill provisions. Otherwise ~~C~~credit for any excess energy exported to the EU shall not be applied to reduce any fixed monthly customer charges or minimum bill provisions imposed by the EU under Commission-approved rate and rider schedules.

Interconnection Rule, Chapter 3

102 Interconnection fees shall be governed as follows for all Interconnection Requests and shall be published on each EU's website: 1. An EU may not charge an application, or other fee, to an applicant that requests Level 1 interconnection review. ~~However, if an application for Level 1 interconnection review is denied because it does not meet the~~

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~~requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure in accordance with the MDGIR, the EU may impose a fee for the resubmitted application, consistent with this section.~~

5. What, if any, modifications to the Net Metering and Interconnection Rules should the Commission consider to better enable commercial and industrial enterprises to self-supply?

No response.

6. What, if any, modifications should be made to the annual reporting requirements of the current Net Metering Rule?

The current reporting requirements could be further enhanced by requiring EUs to identify the total number of customers that are being compensated under the Low Income Benefits Adder, as well as the total number of new customers for the applicable year's report that are being compensated under the Low Income Benefits Adder. This information will help the Commission and other stakeholders track the progress being made to boost LMI participation in net metering.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 5

100 Each EU with one or more RENMICs connected to its grid shall submit to the Mississippi Public Service Commission a Net Metering report within 90 days of the end of each calendar year. The report shall include the following information regarding RENMICs during the reporting period:

1. The total energy expressed in kilowatt-hours supplied to the EU's grid by RENMICs and a description of any estimation methodology used;

2. The total number of RENMICs that were paid for excess energy exported to the EU at the end of any Billing Period(s) during the prior calendar year;

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3. The total dollar amount by month that the EU paid to RENMICs for excess energy exported to the EU during the prior calendar year, with the amount paid for each month for the Low Income Benefits Adder separately identified;

4. The total number of net metering DGFs by resource type and eligibility status with respect to the Low Income Benefits Adder that were interconnected at the end of the prior calendar year;

5. The total rated nameplate direct current generating capacity of net metering DGFs installed during the prior calendar year broken out by resource type and eligibility status with respect to the Low Income Benefits Adder; and

6. The percentage of the EU's total system peak demand from the prior calendar year represented by the total rated nameplate direct current generating capacity of net metering DGFs.

7. Should the Commission modify or remove the existing cap(s) on total installed net metering capacity?

Yes. The Commission should remove the existing cap on total installed net metering capacity. At the very least, the Commission should make the cap inapplicable to residential customers to ensure households continue to have access to beneficial DG technologies. An artificial cap on the growth of DG creates a stark "cliff" at the cap level, where DG systems installed after the cap is reached would be subjected to a significantly smaller and therefore financially punitive compensation rate for excess generation among other unfavorable terms. This would have the effect of making new DG systems uneconomic for the vast majority of prospective customers, and thereby serves as a barrier to customer access to DG. It also discourages solar installers from participating in Mississippi's program, from making long term investments in opening new offices and warehouses, and from hiring Mississippi residents, as it severely restricts the potential number of DG customers and the resulting economic growth opportunity for entrepreneurs

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and established companies. Finally, creating such a cliff does not comport with the ratemaking principle of gradualism.

In the alternative, if the Commission wishes to maintain a net metering cap, it should consider articulating a transition policy that would result in a gradual transition of net metering after the cap is reached to a successor policy to avoid dramatic changes that could lead to a boom-and-bust cycle of rooftop solar growth.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 3

~~102 EUs may refuse additional net metering requests if the total Net Metering direct current capacity in kW, as reported through these requirements, exceeds at any time 3 percent of the EU's total system peak demand expressed in kW recorded during the prior calendar year.~~

103 Each EU shall develop a tariff for Net Metering and interconnection policies in concordance with this MRENMR and the MDGIR. ~~Each EU shall make Net Metering available to eligible RENMICs on a first-come, first-served basis until such time as the aforementioned cap has been reached.~~

8. Should the Commission modify the timing or manner in which net metering customers are credited or compensated for excess energy exported to the grid?

Yes. The Commission should modify the existing compensation framework so that excess energy is compensated as kWh bill credits that offset energy purchased from the EU on a 1:1 basis, with unused credits during the billing month rolling over to the following month on an indefinite basis (*i.e.*, retail rate net metering). Refer to PosiGen's response to Questions 1 and 2 for additional information and for specific changes proposed.

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9. What measures or mechanisms could most equitably reduce the upfront cost burdens faced by customers interested in self-supply through net metering?

To equitably reduce the upfront cost burdens faced by customers interested in net metering, the Commission should move to retail-rate net metering, expand eligibility to the existing Low Income Benefits Adders, and maintain provisions in its Net Metering Rule that allow for net metering systems to be leased.[28] Furthermore, the Commission should ensure that most residential systems can continue be interconnected under the Level 1 screens contained in the Interconnection Rule as solar adoption grows in the state.

Refer to PosiGen's response to Question 1, 2, 3, and 4 for additional information and for specific changes proposed.

10. What role, if any, should the Mississippi Public Utilities Staff serve in reviewing facilities studies for Level 2 and/or 3 interconnections?

No response.

11. In light of the Commission's recent approval of advanced metering infrastructure (AMI) for Entergy and Mississippi Power Company, are bi-directional meters still needed for effective net metering?

No, bi-directional metering infrastructure is not necessary to implement net metering, even without AMI. Bi-directional metering infrastructure is only necessitated by having different rates for imported and exported energy; if there is true 1-for-1 net

[28] Net Metering Rule 2.107 provides that "The electricity customer must own or lease the DGF producing the Renewable Energy on the electricity customer's side of the meter in order to qualify as a RENMIC under this MRENMR, unless otherwise approved by the Commission."

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metering, the meter can simply record net energy delivery over time without tracking total imports and total exports, as bi-directional metering does.

12. To the extent a commenter proposes a new or different compensation scheme, please explain how that proposal would directly affect a Mississippi customer's ability to self-supply. Answers to this question should include any relevant studies, surveys, financial modeling or other specific data-driven evidence supporting the position.

Under retail rate net metering, a customer would continue to be able to self-supply. The only change would be to the crediting of excess energy. As consumers vary in their energy usage patterns, site characteristics, and potential generation from a DG facility, there is not a specific "magic number" that makes a DG facility either "economic" or "uneconomic" for all customers. Rather, this operates along a continuum, where the higher the effective compensation rate, the more customers that can economically benefit, and the larger the potential economic benefit that can be realized over the life of the DG facility. Notwithstanding that caveat, based on PosiGen's experience installing DG facilities in other states and its understanding of current rooftop solar costs, PosiGen is confident that increasing the compensation rate to the volumetric retail rate would provide a substantial increase in the economic viability of rooftop solar for many consumers in Mississippi. It would also bring Mississippi's net metering policy in line with those adopted by most other states. As noted above, the previously conducted cost-benefit analysis of net metering in Mississippi found that above-retail rate crediting could be necessary to incent consumer adoption of DG facilities. PosiGen believes that given the decrease in costs to install a rooftop solar facility experienced since the study was completed, retail rate compensation

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would strike the ideal balance of making DG facilities economically viable without imposing undesirable impacts on non-participating customers.

Increasing the credit rate to the volumetric retail rate is critical, not just from a dispassionate economic analysis perspective, but also from a consumer acceptability and psychological perspective. In general, it is PosiGen's understanding that consumers experience difficulty in understanding the complicated calculation underlying the Total Benefits of Distributed Generation compensation framework. Furthermore, the below-retail rate compensation creates a perception among many consumers that they are being unfairly compensated by the utility, as the rate they are getting paid for excess energy is substantially below the rate they are being charged by their utility for consumption. Both of these factors can significantly dampen customer demand and willingness to invest in a DG facility – even if the given compensation rate could otherwise "pencil out" for an individual customer.

Refer to PosiGen's response to Questions 1 and 2 for additional details and proposed changes.

13. Should the Net Metering Rule incorporate uniform rules or standards applicable to community solar projects and, if so, in what way and to what extent?

No response.

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14. Should the Commission continue to condition a customer's receipt of the additional compensation allowed by the non-quantifiable benefits adder on the customer's voluntary transfer of their REC ownership?

No. The Commission should discontinue its non-quantifiable benefits adder and implement retail rate net metering instead, as described more fully in PosiGen's response to Questions 1 and 2. RECs are a property right that reflect the environmental attributes of renewable energy generation, and customers who incur the full cost of installing DG facilities should not have the REC value associated with that investment forfeited to entities that did not contribute to the cost of the facility. Participation in net metering should not be conditioned on transferring RECs generated by a DG facility to the EU. Unfortunately, Mississippi Power's net metering tariff currently contains a provision that requires a net metering customer to "voluntarily" transfer their RECs to Mississippi Power as a condition of receiving compensation under the current net metering compensation rates.[29] Likewise, Entergy conditions receiving the Non-Quantifiable Expected Benefits Adder on the net metering customer transferring all RECs to the utility.[30]

This requirement runs directly counter to national best practices, as the majority of states with net metering policies have specified that RECs are owned by the net metering

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[29] Mississippi Power, "Renewable Net Energy Metering Rate Schedule "RENM-1A," available at: https://www.mississippipower.com/content/dam/mississippi-power/pdfs/residential/pricing-and-rates/special-application-rates/RENM-1A.pdf.

[30] Entergy Mississippi, "Net Energy Metering Rider Schedule NEM-1 (Third Revisions)," available at: https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_nem.pdf?_ga=2.242323074.1289358977.1616522104-804021187.1615315818.

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customer.[31] For Southeastern examples, Arkansas[32] and Kentucky[33] specify that RECs associated with a net metering system are owned by the customer. The Commission should follow suit and explicitly provide that RECs are both owned by the net metering customer and that the net metering customer is not required to transfer RECs to the utility as a condition of receiving the full benefits of participating in net metering.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 3

111 Any renewable energy credits (RECs) created by the RENMIC are the property of the RENMIC, unless otherwise approved by the Commission. The EU shall not charge any back-up, standby, or Exit Fees to a RENMIC, unless otherwise approved by the Commission. The RENMIC shall not be required to transfer RECs to an EU as a condition of participating in the EU's net metering program or as a condition to receiving any net metering benefit, including but not limited to retail rate compensation and the Low Income Benefits Adder, as applicable. An EU may offer to purchase RECs from RENMIC in exchange for a payment or incentive that is additional to, and separate from, the benefits and/or compensation rate a RENMIC receives under the net metering program.

15. Should the Commission permit meter aggregation by a single net metering customer owner?

Yes. Specifically, PosiGen believes that all residential customers should be permitted to aggregate their meters for the purpose of crediting and billing under net metering. This could be important to certain types of residential customers that have more than one meter installed, such as residential customers that have garages, sheds, or other separately metered loads. Expressly allowing meter aggregation for residential customers

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[31] National Conference of State Legislatures, "Net Metering Policies," November 20, 2017, Available at: https://www.ncsl.org/research/energy/net-metering-policy-overview-and-state-legislative-updates.aspx#:~:text=REC%20Ownership,excess%20electricity%2C%20owns%20the%20REC..

[32] SB 145, enacted March, 2019. *And see*, Order No. 7, Docket No. 20-015-U (Central Arkansas Water), pp. 93-95 (the first NEM application final order since SB 145, affirming that a net metering customer owns the RECs and may sell them).

[33] Interconnection and Net Metering Guidelines, available at: http://www.psc.ky.gov/agencies/psc/Industry/Electric/Final%20Net%20Metering-Interconnection%20Guidelines%201-8-09.pdf.

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would allow these customers to install one net metering system and use the credits generated by the system to offset consumption at all of the customer's applicable meters. Without meter aggregation expressly allowed, residential customers with multiple meters would have to install multiple net metering systems to self-supply energy to offset loads associated with multiple meters, which could be duplicative, burdensome, and expensive, with no apparent compelling government interest to justify this restriction on a customer's property rights and ability to self-supply their own energy.

Specific Changes Proposed (Redlined)

Net Metering Rule, Chapter 3
[New] Unless a RENMIC opts-out of meter aggregation by providing written notice to the EU, the EU shall aggregate all the RENMIC's accounts designated on the Standard Application for billing and crediting purposes.

16. How could the Net Metering Rule most effectively and accurately incorporate new or developing distributed energy resources, such as battery storage?

The 2021 winter storm experienced in states like Mississippi and Texas clearly illustrates the importance of topics such as resiliency and reliability, while bringing to the forefront consumer interest in technologies that can be adopted to prepare for future extreme weather events. New and developing distributed energy resource technologies like lithium-ion battery energy storage systems ("BESS") could offer a promising option for customers that are interested in clean back-up power solutions to protect against future power outages. Although BESS have not been widely adopted in Mississippi yet, the impressive cost declines in BESS technology and their increasingly rapid deployment in many other jurisdictions indicates that BESS could become more prominent in Mississippi in the years to come as costs continue to fall.

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PosiGen recommends that the Commission open a separate docket to consider policies, incentives, and rate structures to encourage the beneficial deployment of BESS in Mississippi. PosiGen also supports changes to the Net Metering and Interconnection Rules that would clarify BESS applicability under net metering and processes for interconnecting BESS to ensure net metering systems with BESS are not subjected to any unfair or burdensome restrictions that would discourage their adoption. For example, the Arkansas legislature enacted Senate Bill 145 in March 2019, which expressly provides that energy storage devices may be paired with net metering systems if the system is configured to receive electricity solely from a net metering system, and the capacity of an energy storage device may not be used to calculate the maximum generating capacity of a net metering system.[34] Likewise, Mississippi's Net Metering Rule should also expressly provide that BESS will not count towards the system size limitation (*e.g.*, the 20 kW limit for residential customers) and that net metering systems may be paired with BESS that is charged from the net metering system.

In addition, residential net metering systems paired with BESS should not be subjected to additional application fees, lengthy application review processes, or other unfavorable terms relative to net metering systems without BESS. While best practices regarding BESS are still emerging, PosiGen notes that the aforementioned IREC *Model Interconnection Procedures* provide an initial discussion and recommendations on BESS interconnection guidelines that the Commission could find valuable in further informing its consideration of these issues.[35]

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[34] Available at: https://www.arkleg.state.ar.us/Bills/Detail?ddBienniumSession=2019%2F2019R&measureno=sb145.

[35] Interstate Renewable Energy Council, Inc., Model Interconnection Procedures (2019), available at https://irecusa.org/publications/irec-model-interconnection-procedures-2019.

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17. What role, if any, should the Commission's Joint Solar Safety and Net Metering Working Group continue to serve going forward?

No response.

18. What measures and mechanisms should the Commission consider to better enable schools, state and local government bodies, and other non-profit or tax-exempt entities to participate in net metering?

No response.

CONCLUSION

PosiGen thanks the Commission for this timely opportunity to provide comments on the efficacy, fairness, and functionality of Mississippi's Net Metering and Interconnection Rules. The Commission's previously adopted Net Metering and Interconnection Rules provided an opportunity to test whether the Total Benefits of Distributed Generation compensation framework could spur significant investments in DG technologies and allow customers of all income levels to participate in net metering. Unfortunately, it did not work. DG adoption has been slow in Mississippi during a time when it has accelerated in states across the U.S. Further, it does not appear that any low-income customers have been able to take advantage of the promising Low Income Benefits Adder, likely due to the overall low compensation rate underpinning the Total Benefits of Distributed Generation framework.

Accordingly, PosiGen respectfully requests the Commission adopt the proposed modifications to its Net Metering and Interconnection Rules discussed above, including

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but not limited to moving to retail-rate net metering with an adder, enhancing provisions that allow LMI customers to access net metering, removing other barriers that could limit future DG growth, and updating interconnection procedures to ensure residential customers can continue to interconnect under Level 1 screens in a timely manner. These changes would accelerate the growth of DG in Mississippi, allow more customers to benefit from DG, and bring more economic development and job creation to the state.

Respectfully submitted this 5th day of April, 2021.

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CERTIFICATE OF SERVICE

I, Elizabeth Galante, do hereby certify that in compliance with RP 6 of the Rules:

1. An electronic copy of the filing has been filed with the Commission via e-mail to the following address: efile.psc@psc.state.ms.us.

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This the 5th day of April, 2021.

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